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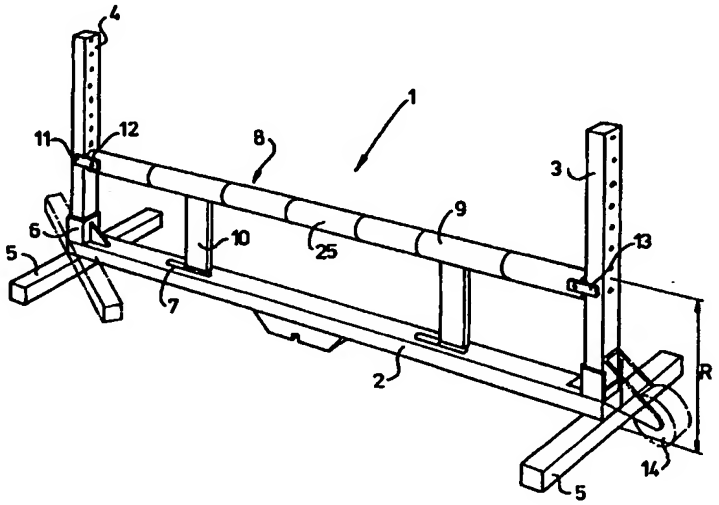

(57) Abstract

The invention relates to a jump for horses. The jump consists of two uprights, positioned some distance apart, between which one or more bars extend. With this arrangement one of the bars extending between the uprights is a base bar, the uprights being fixed to the ends thereof. The jump also comprises a drop–down part which is or can be hingeably fixed with respect to the base bar by means of hinges, and retaining means by means of which the drop–down part can be held in an upright position in a plane spanned by the uprights. However, the retaining means allow the drop–down part to drop down if a horse jumps into the drop–down part and/or runs into the latter and/or touches said drop–down part when jumping. The drop–down part is preferably provided, in the middle thereof, with a grip component by means of which a user can lift the jump in order to move it. With this arrangement the force exerted by the retaining means on the drop–down part in order to hold the latter in its upright position will then be sufficient to hold said drop–down part in a fixed position with respect to the uprights during lifting.

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Jump for horses

The invention relates to a jump for horses, such as is used in horse riding (show jumping). Such jumps for horses generally comprise two uprights, positioned some distance apart, between which one or more bars extend. The horses then have to jump over the highest of these bars.

In this context the conventional jumps for horses known from the prior art all consist of two separate uprights, each of which has its own foot, with the aid of which they can be placed some distance apart. One or more bars, over which the horses are intended to jump, are then mounted between these uprights with the aid of so-called cups. If a horse then jumps into the bar/bars, runs into the latter or touches the top bar, the respective bar/bars will then be raised out of the cups and fall to the ground. This is to prevent the horse from injuring or hurting itself.

The disadvantage of these known jumps is that the building and moving thereof is laborious as a consequence of the numerous separate components and costs a great deal of effort and time because of the need to walk backwards and forwards several times.

The aim of the present invention is to provide an improved jump for horses which, in particular, offers a solution to the abovementioned problems.

Said aim is achieved according to the invention in that

- one of the bars is a base bar extending along the ground,
- the uprights extending upwards from the base bar are fixed to the base bar at opposing ends thereof and
- the jump further comprises a drop-down part which is or can be hingeably fixed with respect to the base bar by means of hinges and comprises retaining means which are equipped such that, on the one hand, they are able to hold the drop-down part upright in the plane spanned by the uprights and, on the other hand, allow the drop-down part to drop down if a horse jumps into the drop-down part and/or runs into and/or touches said drop-down part.

The jump according to the invention is thus a jump which can be moved as a whole. After all, the base bar, the uprights and the drop-down part are joined to one another to form a whole. The horse is prevented from being injured or hurt in the event of contact with the drop-down part by constructing the drop-down part in such a way that said part can drop down from an upright position if a resistance force provided by the retaining

means is overcome as a consequence of the contact made by the horse with the drop-down part. If desired, in addition to the drop-down part, a few additional bars can have been mounted above the latter between the uprights in a conventional manner with the aid of, for example, cups. The drop-down part can take diverse forms, such as, for example, that of a gate or, as is shown in the figures with this application, that of a horizontal bar with two vertical arms extending between the bar and the base bar.

According to an advantageous embodiment of the invention, the drop-down part and the uprights can be coupled in the upright position by means of the retaining means. That is to say, the retaining means join the drop-down part to the upright in a manner such that this join can be broken in the event of a horse jumping into the drop-down part and/or running into and/or touching said drop-down part. Such retaining means can be implemented in diverse ways. For instance, it is, for example, conceivable to provide the uprights and/or the drop-down part with friction means by means of which the uprights and the drop-down part are joined to one another. Such friction means then ensure that a resistance in the form of a friction force has to be overcome to cause the drop-down part to drop down. It is also conceivable to join the uprights and the drop-down part to one another by means of a break pin, the break load of which is so chosen that the horse will not hurt or injure itself if it comes into contact with the drop-down part.

According to an advantageous embodiment, the drop-down part will have a top section which in the upright position extends essentially from the one upright to the other upright and the retaining means will comprise a strip of a flexible material provided at each end of the top section on both sides in the direction in which the drop-down part can drop down, each strip of flexible material being fixed in each case by one end to the top section or to the respective upright and being in contact with the respective upright or the top section at the other end so as to allow the drop-down part to drop down in both directions as a consequence of the flexibility of the strips. Retaining means in the form of such strips of a flexible material are simple to implement, reliable in operation and, in particular, also not susceptible to faults as a result of sand that is present in large amounts in the environment in which a jump according to the invention is used.

In order to be able to use the jump in two jump directions, it is advantageous according to the invention if the drop-down part is able to drop down in the two opposing directions from the upright position.

In order to make the jump easily movable, it is advantageous according to the

invention if the drop-down part is provided with at least one grip component, preferably fitted symmetrically with respect to the middle of the drop-down part, which can be used by a user to lift the jump. In the case of a single grip component, this will then have been fitted in the middle of the drop-down part, that is to say halfway between the uprights, so that, if necessary, a single person is able to lift and move the jump in its entirety.

So as to make it possible to lift the jump by the drop-down part without additional fixing of the drop-down part in its upright position, it is advantageous according to the invention if the resistance exerted by the retaining means to hold the drop-down part upright is sufficient to hold the drop-down part upright in the plane spanned by the uprights when a person takes hold of and lifts the jump by the drop-down part. In this context a balance has to be struck between, on the one hand, the minimum resistance provided by the retaining means against dropping down of the drop-down part which is required for said lifting and, on the other hand, the maximum permissible resistance provided by the retaining means against dropping down in relation to preventing a horse being hurt or injured.

So as to be able easily to uncouple the drop-down part from the base bar, if desired, it is advantageous according to the invention if the hinges each comprise one pin, attached to the base bar or the drop-down part, with a free projecting end and a push-on part, which can be slid over the pin, fixed to, respectively, the drop-down part or the base bar and if the free projecting ends of the pins of the hinges point in the same direction.

As a further measure to prevent a horse becoming hurt and/or injured it is advantageous according to the invention if the uprights are able to drop down laterally to the outside in the plane spanned by said uprights, that is to say away from the drop-down part.

Such a construction of the uprights capable of dropping down laterally can be achieved easily according to the invention if the uprights are mounted in U-sections which are open towards the sides of the jump and are fixed to the base bar and if each U-section is provided with one or more resistance elements which hold the uprights upright so as to permit the respective upright to drop down laterally when a sufficiently high lateral force is exerted thereon. With this arrangement the sufficiently high lateral force will then be chosen so as as far as possible to prevent a horse running into the upright from being hurt and/or injured.

So as to be able to set up the jump according to the invention easily without, for

example, having to dig it into the ground, it is advantageous according to the invention if the jump according to the invention is provided with at least two feet which extend or can be positioned in the transverse direction. Said feet can have been fixed to the underside of the so-called base bar and optionally constructed such that they are rotatable with respect to the latter, so that they are rotatable parallel to the base bar if, for example, the jump has to be stored in a space-saving manner.

So as to be able to move the jump according to the invention more easily it is advantageous if said jump is provided on one outside edge with a castor or wheel, the axis of rotation of which extends transversely to the plane spanned by the uprights. The jump then has to be lifted only at the side opposite to the wheel side such that the jump is borne by the wheel and the person or auxiliary device lifting it, after which the jump is movable by wheeling.

So as to be able to counteract undesired dropping down of the drop-down part when, for example, moving the jump, it is advantageous according to the invention if the drop-down part is lockable in its upright position. Locking of this type can be implemented in diverse ways, for example by joining the uprights and the drop-down part to one another by means of a pin, a slide or a swivel lock. Said lock can then be brought into the unlocked position if the jump is then used to allow horses to jump over it.

In order to keep the weight of the jump as low as possible, it is advantageous according to the invention if said jump is constructed using essentially tubular sections, which, preferably, have been essentially produced solely from a lightweight type of metal, such as aluminium. In relation to sturdiness, it is advantageous according to the invention with this arrangement if the base bar is optionally constructed of steel.

In connection with the jump being movable by one person, in particular by lifting the jump by the drop-down part, it is advantageous according to the invention if the height of the drop-down part in the upright position is in the range between approximately 40 cm and approximately 100 cm, for example in the range between approximately 50 cm and approximately 70 cm. According to a preferred embodiment, the height of the drop-down part will be approximately 60 cm. In this context the height of the drop-down part is understood to be the height of the uppermost section of the drop-down part relative to the substrate on which the jump has been set up, when the drop-down part is in its upright position.

The present invention will be explained in more detail below with reference to an illustrative embodiment shown in the drawing. In the drawing:

Figure 1 shows a perspective, diagrammatic view of a jump for horses according to the invention;

Figure 2 shows a detailed view of the jump shown in Figure 1; and

Figure 3 shows a cross-sectional view according to the arrows III - III in Figure 2.

Figure 1 shows a perspective view of a jump 1 for horses for jumping. The jump 1 consists of a base bar 2, under which two feet in the form of bars 5 have been mounted and which base bar 2 is provided at its ends with essentially U-shaped seating components 6 or assembly components 6 opening towards the outside, in which seating or assembly components 6 vertical uprights 3 and 4 have been placed. With this arrangement the vertical uprights 3 and 4 can have been joined to the base bar 2 such that they are permanently fixed or can be disassembled, as will be explained in more detail further below, in a manner which allows dropping down towards the outside.

As can be seen from Figure 1, the bar-shaped feet 5 can optionally have been mounted on the base bar 2 such that they are rotatable, as has been indicated diagrammatically by the dash-and-dot lines. In this way the foot 5 can be brought into a position running parallel to the base bar 2.

A drop-down part 8 capable of dropping down in two directions has been fixed to the base bar 2 by means of hinged joints 7. The axis of rotation of the hinged joints 7 extends parallel to the longitudinal direction of the base bar 2. The drop-down part 8 is able to drop down in two opposing directions from the upright position shown in Figure 1.

In the embodiment shown in Figure 1, the drop-down part 8 consists of a bar-shaped top section 9 and two arms 10 extending downwards therefrom, which arms 10 bear one part of the hinged joint 7 at those ends of the arms which are remote from the top bar 9.

Drop-down part 8 is prevented from dropping down by retaining means 11. In the illustrative embodiment shown the retaining means 11 consist of strips 11 of a flexible material arranged on opposing sides of the top bar 9. Said strips 11 are fixed to the top bar 9 by means of fastenings 12 and each pair of said strips encloses by its free ends 13 a respective upright 3 or 4. As a result of the flexibility of the strip 11, the drop-down part 8 will be able to drop down in the one or the other direction if a horse runs into it, jumps into it or touches the drop-down part 8. With this arrangement it is possible by means of

suitable dimensioning of the strips 11 in terms of dimensions and material characteristics to achieve a situation where the resistance to dropping down provided by the strips 11 is such that a horse does not hurt or injure itself if it comes into contact with the drop-down part 8. It is pointed out that only the two strips 11 located on the side in the direction of view are visible in Figure 1, but it will be clear that two corresponding strips 11 will have also been provided on the opposite other side.

It will be clear that the retaining means can also be implemented in another way within the scope of the invention. For instance, it is possible, for example, to consider the provision of a clamp connection between the ends of top bar 9 and the faces of the uprights 3 and 4 facing said ends. A ball lock with which a ball under spring tension engages in an opposing recess for locking can also be considered. By optionally making the compressive force supplied by the spring adjustable by means of a screw, in a manner known per se, it is then possible to adjust the resistance to dropping down as required.

As is also shown by dash-and-dot lines in Figure 1, a wheel or castor 14 can have been mounted on one side of the jump 1. By then lifting the jump 1 by the opposing other side, the wheel or the castor 14 then comes into contact with the ground and the jump 1 can be moved by wheeling it.

As can be seen from Figure 2, the hinged joint 7 consists of a pin bearer 17 supporting a hinge pin 15, which pin bearer 17 is rigidly attached to the base bar 2, and a push-on component 16, that is rigidly attached to the arm 10. By allowing the pins 15 of the two hinged joints 17 to face in the same direction and allowing the insertion openings in the push-on sections 16 of the two hinged joints also to face in the same direction, but then in the direction opposite to that of the pins, the drop-down part 8 can, if necessary, easily be detached from the base bar 2.

The assembly foot 6 for the uprights 3 and 4 will now be explained in more detail with reference to Figures 2 and 3. The assembly foot 6 consists of an essentially U-shaped section component 19 that is open on the side of the jump 1 at 18. The U-shaped section component 19 is closed on the side and underside at 20 to form a tubular component. The bottom end of the upright drops into said tubular component in order to secure the upright against shifting. It will be clear that as a consequence of the opening 18 in the section component 19 the upright 4 is able to drop down towards the outside in accordance with arrow 21. So as to counteract dropping down towards the outside in accordance with arrow 21, an essentially U-shaped spring 22, located in the section component 19, is

provided, with an assembly and fixing loop 23 extending through section component 19. The free ends of the U-shaped spring 22 are provided with lips 24 bent inwards. Said inward-bent lips 24 prevent dropping down of the upright 4 towards the outside in accordance with arrow 21, at least for as long as the force exerted on the upright 4 in the drop-down direction does not exceed a specific value at which the lips 24 are bent outwards.

As can be seen from the cross-section in Figure 3, the uprights 3 and 4 are made of wood. Preferably, the uprights 3 and 4, and also the feet 5, the top bar 9, the arms 10 and the base bar 2 will be tubular sections, which, moreover, are preferably made of a lightweight material, such as aluminium or possibly even plastic. In connection with the sturdiness of the jump it suffices optionally to make the so-called base bar 2 of heavier construction, for example of steel.

It will also be clear that yet further jump bars can be mounted in conventional cups between the uprights 3 and 4 above the so-called top bar 9 of the drop-down part 8. Especially in connection with the movability by one person, the height R of the drop-down part 8 will specifically preferably be no more than 1 m, for example 60 cm, so that a person is still able to put his/her arm over it. The height over which it is desired to allow horses to jump is frequently higher and, therefore, additional bars are then needed.

In the case of a 3 metre wide jump, that is to say the distance between the uprights is approximately 3 m, it has proved possible according to the invention to produce a jump of the shape outlined in Figure 1 with a total weight of approximately 25 kg. Such a jump can be moved easily by one person by firmly gripping the top bar 9 in the centre at 25 by putting an arm around the top bar and lifting the entire jump 1 at that point.

Claims

1. Jump for horses, comprising two uprights positioned some distance apart, between which one or more bars extend, characterised in that

- one of the bars is a base bar extending along the ground, and in that
- the uprights extending upwards from the base bar are fixed to the base bar at opposing ends thereof and in that
- the jump further comprises a drop-down part which is or can be hingeably fixed with respect to the base bar by means of hinges and comprises retaining means which are equipped such that, on the one hand, they are able to hold the drop-down part upright in the plane spanned by the uprights and, on the other hand, allow the drop-down part to drop down if a horse jumps into the drop-down part and/or runs into and/or touches said drop-down part.

2. Jump according to Claim 1, characterised in that the drop-down part and the uprights can be coupled in the upright position by means of the retaining means.

3. Jump according to one of the preceding claims, characterised in that the drop-down part has a top section which in the upright position extends essentially from the one upright to the other upright and in that the retaining means comprise a strip of a flexible material provided at each end of the top section on both sides in the direction in which the drop-down part can drop down, each strip of flexible material being fixed in each case by one end to the top section or to the respective upright and being in contact with the respective upright or the top section at the other end so as to allow the drop-down part to drop down in both directions as a consequence of the flexibility of the strips.

4. Jump according to one of the preceding claims, characterised in that the drop-down part is able to drop down in the two opposing directions from the upright position.

5. Jump according to one of the preceding claims, characterised in that the drop-down part is provided with at least one grip component, preferably fitted symmetrically with respect to the middle of the drop-down part, which can be used by a user to lift the jump.

6. Jump according to one of the preceding claims, characterised in that the forces exerted by the retaining means to hold the drop-down part upright are sufficient to hold the drop-down part upright in the plane spanned by the uprights when a person takes hold of and lifts the jump by the drop-down part.

7. Jump according to one of the preceding claims, characterised in that the hinges each comprise one pin, attached to the base bar or the drop-down part, with a free projecting end and a push-on part, which can be slid over the pin, fixed to, respectively, the drop-down part or the base bar and in that the free projecting ends of the pins of the hinges point in the same direction.

8. Jump according to one of the preceding claims, characterised in that the uprights are able to drop down in the plane spanned by them in a direction away from the drop-down part.

9. Jump according to Claim 8, characterised in that the uprights are mounted in U-sections which are open towards the sides of the jump and are fixed to the base bar and in that each U-section is provided with one or more resistance elements which hold the uprights upright so as to permit the respective upright to drop down laterally when a sufficiently high lateral force is exerted thereon.

10. Jump according to one of the preceding claims, characterised in that said jump is provided with at least two feet which extend or can be positioned in the transverse direction.

11. Jump according to one of the preceding claims, characterised in that said jump is provided on one outside edge with a castor or wheel, the axis of rotation of which extends transversely to the plane spanned by the uprights.

12. Jump according to one of the preceding claims, characterised in that the drop-down part is lockable in its upright position.

13. Jump according to one of the preceding claims, characterised in that said jump is constructed using essentially tubular sections, preferably essentially only of a lightweight type of metal, such as aluminium.

14. Jump according to Claim 13, characterised in that the base bar is constructed of steel.

15. Jump according to one of the preceding claims, characterised in that the height of the drop-down part in the upright position is in the range between approximately 40 cm and approximately 100 cm, for example approximately 50 cm to 70 cm.

Fig -1

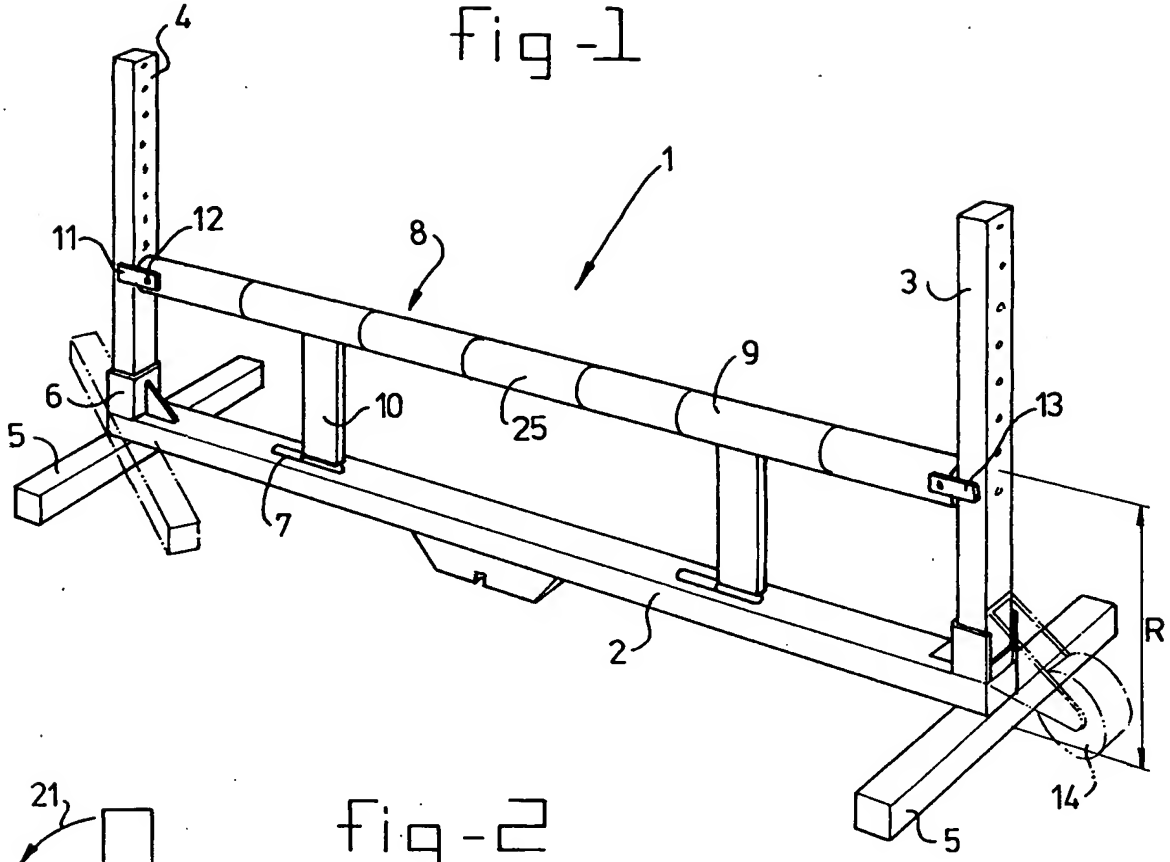


Fig -2

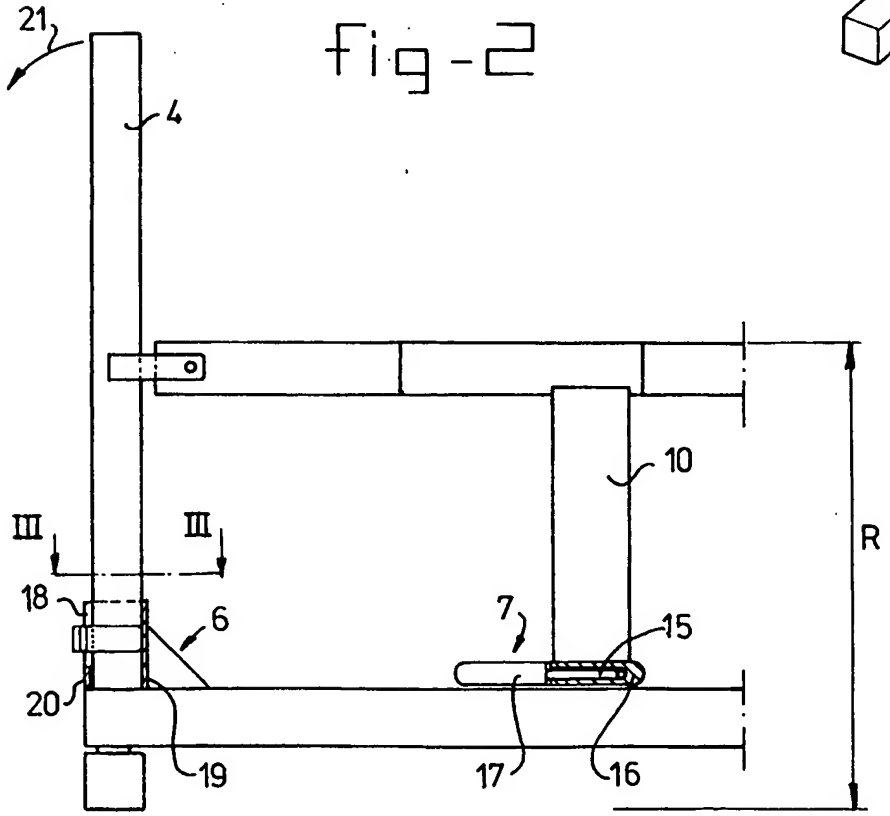
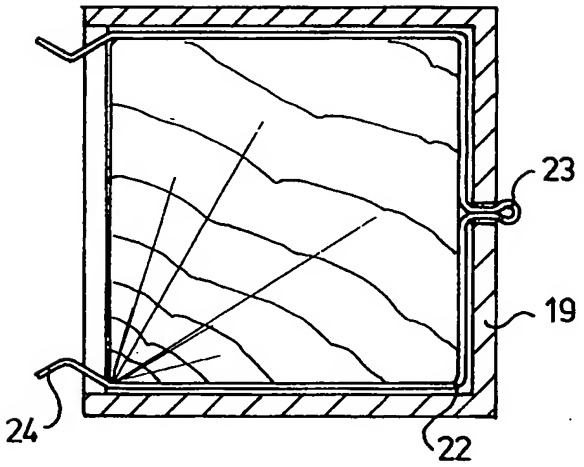


Fig-3



INTERNATIONAL SEARCH REPORT

Int .tional Application No
PCT/NL 99/00114

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A63K3/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A63K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 81 777 C (SEEGER) 8 September 1894 see the whole document	1,2,4,15
A	FR 390 688 A (MORTIMER) 12 October 1908 see the whole document	1-15
A	GB 452 975 A (SMITH) 3 September 1936 see the whole document	1-15

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
15 June 1999	23/06/1999

Name and mailing address of the ISA	Authorized officer
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INTERNATIONAL SEARCH REPORT

Information on patent family members

Int ational Application No
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 81777 C		NONE	
FR 390688 A		NONE	
GB 452975 A		NONE	